Menlo Park Notebook #5 [N-78-12-02]

This notebook covers the period December 1878-January 1879. It contains experiments by Edison's nephew, Charles P. Edison, on the electromotograph telephone. The label on the front cover is marked "New Receiver." The book contains 285 numbered pages.

Blank pages not filmed: 6-7, 10-11, 20-21, 24-25, 28-29, 32-33, 36-37, 42-43, 232-233, 250-275, 280-281.

No. 5

LIBRARY OF THE

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Sept 1, 1896.

This note book contains Telephone Experiments and Chemical Tests for telephone experiments, for electromotograph telephone receiver of loud speaking telephone, made in 1878 & 1879, notes made by Charles P. Edison, brother of Thomas A. Edison.

(W. J. H.)

New Rochelle - Dec 2nd 1876

Thos. A. Edison

Experiments with different mixtures to find out difference or change in resistance of Button when left in contact with water

Ingredient Salts	Result
Caustic Potash	No Sec.
Carbonate of Potassium	Sec.
Sulphide of "	
Iodide "	
Ammonium Chloride (sandy)	
Lithium chloride	
Strontium Chloride (sandy)	
Cerium Chloride	
Aluminum Chloride	
Aluminum + Sodium Chloride	
Beryllium Nitrate	
Magnesium Chloride	
Zinc Chloride	
Copper Chloride	
Protochloride of Iron	
Chloride of Magnesium	
" " Bicarbonate	

Pyrogallic + Nitrate Ammonia		
—		
_ Pyrogallic + Nitrate Calcium		
—		
Pyrogallic + Carb Potash		
—		
_ Pyrogallic + Chloride zinc		
—		
_ Pyrogallic + Chloride Ca		
—		
_ Sugar —		
—		
_ Pyrogallic + Sulphate Soda		
3 - pyrogallic + nitrate Stronti		
4 _ Fluoride Calcium. Nit. Ammon		
0 - " Nitrate Stronti		
1 _ " Sulphate Soda		
" Carbonate Potash		

Mr Rankin
Dougall
Chas P. Cairney

		Weight in a food at	Weight in Stomach at	Weight in Stool
3	Fluoride Calcium + Nit. Calcium			
4	" " + Chloride Zinc			
5	" " + Chloride Calcium			
6	Gallic Acid + " "			
7	" Sulphate Soda			
8	" Nitrate Calcium			
9	" Nitrate Strontia			
10	" Carbonate Potash			
11	" Nitrate Ammonia			
12	Pound Marble " Strontia			
13	" Sulphate Soda			
14	" Carb. Potash			

5. Powd marble + nit ammonia

6. " + nitrate Calcium

7 " + Chloride zinc.

8 " + Chloride Calcium

9 Bicarb Soda + nit Calcium

10 " + Chloride "

ew Receiver Dec. 1876
Chas. J. Edison

	Damar	Nitrate Calcium	No 1	N.C. 1000	N.C.	N.C.
	Damar	" "	No 2	N.C. 1146	1400	2000
	"	Chloride Calcium	No 1	N.C. 1000	N.C.	
	"	" "	No 2	1000 246	400	1000
5	"	Chloride Zinc	No 1	180	Buried	
6	"	(Buried) "	No 2	140		
7	"	Carb Potash	No 1	N.C.		
8	"	" "	No 2	N.C. 100		
9	"	Nitrate Ammonia	No 1	N.C.		
10	"	"	No 2	N.C. 32	400	700

Mem Reading
Dec 5th 1878
Chas. P. Edison

Mem Reading – Dec 5th – 1878
Chas. P. Edison

1	Damar – Nitrate Strontia	1	N.C.	NC	NC NC	
2	" "	2	N.C.	N.C.	N.C.	
3	" Sulphite Soda	1	N.C.	NC		
4	Carb Baryta – Nit Strontia	1	N.C.			
5	" " "	2	N.C.			
6	" Sulphite Soda	1	N.C.			
7	" "	2	N.C.	Soo	Soo Soo	
8	" Nitrate Ammonia	1	N.C.			
9	" "	2	N.C.			
10	" Carb-Potash	1	NC			
11	" "	2	NC			

New Receiver Dec 5th 1878
Chas. L. Edison

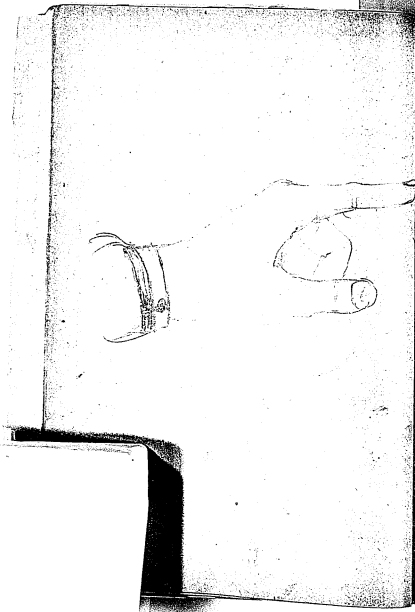
1	Carb. Potassa – Chlorid & Calcium	1	NC	500	800	19
2	" " " "	2	NC	1000	3000	
4	" " Chlorid & zinc	1	NC	2000		
4	" " " "	1	NC	2000		
5	" Nitrat & Calcium	1		2000	1900 NC 3000	
6	" "	2	NC	500	1900	
7	Ti Carb Soda "	1	NC	NC		
8	" " "	2	NC	NC		
9	" " Chlorid & Calcium	1	NC	NC		
10	" " "	2	NC			
11	" " Carb Soda	1	NC	NC		
12	" " "	2	NC	NC	1300	

New Receiver - Dec 5th 1878
(Mas P. Edison)

3	A Carb Soda + Nitrate Ammon	1	NC		
4	" " " " "	2	NC	100	
5	" " Sulphate Soda	1	NC	NC	NC
6	" " (Bicarbonate) "	2	NC	NC	
7	" " Nitrate Strontia	1	NC	NC	
8	" " "	2	NC		
9	" " Chloride Zinc	1	[illegible]		
10	" " "	2	NC		
11	Camphor + Nitrate Strontia	1	NC	NC	NC
12	" " "	2	NC	NC	NC
13	" Nitrate Ammonia	1	NC	1100	NC
14	" "	2	NC	160	240

Received Dec 5th 1878
Thos A. Edison

1 Camphor + Cars Potash no 1	NC		
" " " 2	NC		
8 B. Carb Soda + Nitrate Calcium	NC	Pat 160	
9 - Gallic Acid + Sulphate Soda	NC		
29 Fluoride Calcium Sulphate Soda	NC	400	[illegible]
30 - gallic Acid + Nitrate Ammonia	NC	[illegible]	
31 powd marble + Nitrate Strontia	NC	460	[illegible]
32 Fluoride Calcium - Nit Ammonia	NC		
33 Powd marble - Sulphate Soda	NC	NC	
34 powd marble + Nitrate Calcium	NC		
35 - pyrogallic + " "	NC		
36 gallic Acid + Nitrate Strontia	NC	43	[illegible]



New Receiver Dec 5th 1878
Chas. F. Edison

- BiCarb. Soda. Chloride Calcium	NC	30	Soft
powd marble + Nitrate Ammonia,	NC	26	Soft
" " Chloride Calcium	NC	80	Soft
- pyrogallic acid + Nitrate Strontia	NC	100	soft

New Receiver Dec 6th 1878
Chas. F. Edison

Sugar - Nitrate Strontia - 1	NC	2000	NC
" Nitrate Ammonia 1	NC	1000	soft
" " 2	NC		
- " Carb. Soda 1	NC		
" " 2	NC		
" Chloride Zinc 1	NC		
" " 2	NC		
" Chloride Calcium 1	NC		

New Receipts Dec 6th 1878

	Sulphate Magnesia	Nitrate Chlorine		NC	2000		
	"	" + Chloride	"	3000	40	110 / 110	
1	"	" Sulphate Soda	1	NC	70	100	
02	"	" Chloride Zinc		400	32	200 / 100	
03	"	" Bi Carb Soda		NC	120	200 / 46 / 170	
04	"	" Nitrate Strontia		NC	87	100	
05	"	" Nitrate Ammonia		875			
06	Phosphate Lime	Nitrate Strontia	1	NC	NC	NC	
107	"	" — " "	2	NC	NC	NC	
108	"	" Carb Potash	1	NC	NC		
109	"	" " "	2	NC	44		
110	"	" Nitrate Ammonia	1	NC	90	27 Groups	
111	"	" "	2	3000			
112	"	" Sulphate Soda	1	NC	600	120 / 900	
113	"	" "	2	NC	50	100 Bl	

Lecture Dec 17 1878
Chas Lin

14	Thos. Lime & Nitrate Calcium		NC	600		
15	" " Chloride Zinc	1	39	20	Soft Bulb	
16	" " " "	2	28	20	Soft Bulb	
17	" " Chloride Calcium	1	NC	600	700	
18	" " " "	2	24	20	Soft Bulb	
19	Bermuda Arrowroot	"	1	NC	NC	NC
20	" " "	2	NC	800	1000	
21	" " Nitrate Calcium	1	NC	NC	NC	
22	" " Succinate Soda	1	NC	NC		
23	" " " "	2	NC	1000		
24	" " Chloride Zinc	1	NC	100	[illegible]	
25	" " " "	2	NC			
26	" " Nitrate Ammonia	1	NC			
27	" " " "	2	NC	100	[illegible]	

New Receivers Dec 1st 1878
Chas. P. Edwards

128	Burmuda Ammonia	Nit Strontia		nc	nc	nc
129	"	"	2	nc	nc	nc
130	"	Carb. Potash	1	nc		
131	"	"	2	nc		
132	Snuff	Nitrate Ammonia	1	1000	600	
	"	"	2	300		
134	"	Nitrate Strontia	1	Pu		
135	"	Carb Soda		400		
136	"	Sulphate Soda		nc		
137	"	"	2	nc	186	Soll
138	"	Chloride Zinc	1	nc	60	Soll
139	"	"	2	80	400	

New Receivers Dec 9th 1876
Read. Edison

140	Snuff + Nitrate Calcium	400	18	Soft	
141	" " " " 2	10	Soft		
142	" " Chloride Calcium	NC	110	Soft	
143	" " " " 2	Burned			
144	Dextrine " " 1	to Soft			
145	" " " 2	140	Soft		
146	" Nitrate Calcium	NC			
	Dec 10th 1876				
147	Nitrate Ammonia	NC	Burned		
148	Carbonate Soda	to Soft			
150	Nitrate Strontia	110	Soft		
151	Dextrine Nitrate Strontia	NC	NC		
152	" " " 2	NC			

New Receiver Dec 10th 1878

Chas. F. Edison

153	Dextrine & Sulphat Soda		NC		
154	" & Sulph Soda		NC	NC	
155	" Chloride Zinc		NC	NC	
156	" " "	2	Perfect		
157	Carbonate Soda		140	[illegible]	[illegible]
158	" " "	2	Perfect		
159	" Nitrate Ammonia		NC	NC	
160	" " "	2	NC	NC	
161	Bi Ox, Mang & Carb Potash				
162	" " " " "	2	54	Perfect	
163	" " " Nitrate Ammonia	1	NC	Perfect	

Dec 10th 1878

David Pelham

163	Bk Ox Manq - Chloride Calcium	2	200	Polish	Soft
164	" " " " "	2	60	Soft	
165	" " Chloride Zinc		90	Soft	
166	" " " "	2	60	Soft	
167	" " Nitrate Strontia		NC	Bursted	
168	" " " "	2	NC	Soft	
169	" " Nitrate Calcium		NC	3000	
170	" " " "	2	Soft		
171	" " Sulphate Soda		NC	1400	
172	" " " "	2	NC		

New Receiver Dec 12th 1878 p6 87

Chas. P. Edison

Tried experiment with button made of ferrid cyanide Pottassium one half, Chalk one half - and small amount of Caustic Soda - did not work) could not hear it

made saturated solution Caustic Soda such as in Rock. and made button of chalk with strong solution also one of Wood Ridge Clay with same solution

New Receiver Dec 12 1878
Chas. P. Edison

Button of wood bridge
Imp. Caustic Soda after being
in box 24 hours is Non Conducting

Button of Chalk and Caustic
under same conditions
measured 3000. ohms res.

[redacted]

Make button for Receiver of
Sulphate Magnesia and
Sulphate Soda

Button of Sulphate
Magnesia and Sulphate
Soda with about half
Chalk.

New Receiver Oct 12 1878
Chas Edison

Button of sulphate magnesia and Sulphate Soda with small amount of chalk —

testing button Sulphate Soda Sulphate Magnesia with about half chalk is a non conductor, put in box No 200 —

Testing button Sulphate Soda Sulphate Magnesia with little chalk. is non conductor put in box for testing No 201.

New Receiver Dec 12 1878 57

Chas. F. Edison

Phosphate Lime and Sulphate Soda Button receiver Sige

—

Phosphate Lime with strong solution. Caustic Soda

—

Chalk Button for Receiver with Solution Sulphate Soda

—

New Receiver Dec 13th 1876
Chas. F. Edison

Button Rec. Chalk, Sulphate Soda - Acetate Mercury

—

Woodbridge Clay, Sulphate ~~Mercury~~, Soda, Acetate Mercury,

—

New Receiver Dec 13th 1878
Chas. F. Edison

Experiments with Mercury Salts for conductivity

Sulphuret Mercury (black) good Conductor

Hydrarg. Oxid. nigr - Non Conductor

Bi Chromat. Mercury, very slight -

Iodide Mercury. good conductor Some Times other times not at all test it again

Bromide Mercury Non Conductor

Cyanide Mercury. gives 4 digs with heavy pressure on No 1 coil

Cyanat Mercury Non Conductor

New Receiver Dec 13th 1878
Chas. F. Edison

Experiments Mercury Salts "Continued"

phosphor oxydulate Mercury - Non Cond

Bi iodide Mercury - Non Conductor

Hypophosphate Mercury Non Conductor

Perato chloride Mercury - Non Conductor

~~Perato Nitrate Mercury~~ -

thin button sulphuret Mercury
gives no mato graph action

New Receiver Dec 13th 1878

Chas. E. Edison

the button of Carb baryta. Sulphate Soda & Acetate Mercury coherer hunter & and dry test 3000 ohms

the above is good

New Receiver Dec 14th 1876
Chas. U. Gibson

Sulphate Magnesia and Bi Carb Soda No Motograph Effect

Phosphate Lime & Sulphate Soda Very Good Motograph Effect

Testing button No 200 ~~this~~ put in Box last night tried this morning and had good Emeg Effect

New Receiver Dec 14th 1878

Na_2SO_4 Chas P Edison

202 – Sulphate Magnesia, Sulphate Soda and about 1/2 chalk

No 202 – 24 hours in Box non Conductor
No Emy Effect

203 Sulphate Magnesia + Na_2SO_4
in Box 24 hours Non Conductor
No Emy Effect

---

4 $CaCO_3$ + Na_2SO_4 + Hg $\bar{a}$
24 hr. is 10,000 ohms fair Emy Effect

205 Ca_2PO_4 + Na_2O
24 hours in Box 400 ohms Emy Effect good

206 Ca_2PO_4 + Na_2SO_4
about 15000 ohms No Emy Effect

Was Received Dec 14th 1878

Chas P Easson

1 Na_2SO_4 – $CaCO_3$ Slight Conductor after being in box 24 hrs – no Eng Effect

208 – $MgSO_4$ + Na_2SO_4 – Slight Conductor after being in box 24 hrs – No Eng Effect –

209 Na_2SO_4 + Hg $\bar{a}$ + Woodbridge Clay – Has Eng Effect before putting in box

Dec 15th 1878 CPE

No 209 after being in Box 24 hrs in 1000 ohms circ – Note – when first put up to 10 – ~~[illegible]~~ it tested 5000 ohms and decreased steadily until it reached 1000 ohms Can feel Autographic Effect but faint –

Now Received Dec 15th 1878
Chas. D. Gibson

No 205 – Ca, per cent nos 504
Eng Effect after being up for
6 hrs 24 hrs
work good How Calc. Calc and –

Calc Baryta Sulphate Mercury
and Sulphate Soda has been
up Eng effect after being up
6 x 24 hrs – No 2 15

New Lockwood Dec 16th 1878
Rec'd Edison

No 202 Resistance after being in Box 36 hrs. is only slight conductor

203. Resistance after being in Box 36 hrs is but slight Conductor. Showing Edison's Electromotograph Force

New Jersey Dec 16th 1878 – Chas. J. Edison

No 204 – after being in box 36 hrs but
should Condr – showing 4 degrees –
Small Energy Effect –

No 205 – stood on Saturday 14th Nov at
put in box down stairs by itself and
stands at 920 ohms this morning
~~[illegible]~~ –
Energy Effects good [illegible]
[illegible] as good as [illegible]

New Jersey - Dec 16th 1876 (Mr Edison)

No 2. 6 - 36. hs in box slight Condr
Showing 3 degs - Very small Eng.
effect -

No 204 36 hs in box slight Condr
Showing 2 degs - small Eng Effect

205 36 hs in box slight Condr -
showing only one degr -

206 36 hs in box - 3 Cos show no
or [illegible]
[illegible] Eng. Effect -

+

New Received Dec 16th 1879

Dr. J. Faison

Button of Chloride Lime
Iodate - Mercury - Sulphate Soda
finely mixed - Mercury - Boiled oil
and given Bangles Every Effect -

No 212

Button Chloride Lime
Iodate Mercury and
Sulphate Soda is bang
wafer Every Effect - Mercury
does also Resistance
It is the best Button yet on
hand Mosquito
has been standing here in
open air and works bang up
one I held over Night until
it was hot and then worked
and as well -

New Jersey Dec 16th 1878

Thos. A. Edison

Button No 210 of Chloride Silver
Acetate Mercury with a little
Chalk to stiffen is a little
to soft wants more Chalk

Button 211 Chloride Silver
and Thoughtate Silver no Sensi
Effect — think it is to well
wants more Thoughtate Silver

New Receiver Dec 17th 1876 63

Thos. A. Edison

Bullion D12 - which worked good last night after being left out all night has about 15000 ohms resistance this morning and very little Eng effect - after cleaning outfall of bucket the Eng effect is much better - and either wet is as good a fluid as last night -

Bullion D10 under same conditions about same resistance and Eng Effect is N.G.

Bullion D11 same conditions measure .14 ohms resistance and Eng Effect is N.G.

New Receiver Dec 17th 1878
Thos. A. Edison

Button 205 has stood out 48 hrs and conducts very little Elec Effect Small —

Button 205 after being wet slightly works splendid with 2 cells Carbon —

Sulphide Calcium — Chemically Pure Results Mercury — Stands well good conductor bad gas — no Elec Effect is poor — gets better when wet

New Receiver Dec 17th 1876

David Gow

Experiments to determine Conductivity of different Chemicals. —

Experiments tried with 6 Cells Callaud on no 1 coil —

Arsenate Manganese, slightly —

—

Sulphate Silver — Slightly —

—

Lunar Caustic — Non Conductor

—

Sulphuret Silver — Non C

—

Red Sulphuret Antimony Non Cond

Acetate Silver — Non Conductor

—

Carbonate Bismuth — Non Conductor

New Receiver. — Dec 17th 1878 — 91.

Chas. B. Shiva

Acetate Lead. Very slight Cond

Lactate Bismuth. Non Conductor

Chloride Silver Non Conductor

Bismuth Hydr Nitric. N.C.

Hydrang, Oxydat, flow. Dance. N.C

Carbonate Silver. Very slightly.

Oxide Silver. Very small.

Cyanide Silver: Non Conductor

Chem Lecture Dec 17th 1878 93

Chas. E. Ellis

Sulphuret Tin. Good Conductor

Bismuth Valuable - Non Condr

Antimony - Diaphoretic - N.C.

Protoxide Antimony Lightly -

Manganese Hypophosphorous. Conducts a little. Shows 15 Cryst.

Disulphuret of Tin. Fair Cond. Shows 20 degrees ngai -

~~Tungstic Acid~~

New Rochelle Dec 17th 1878

Thos Edison

Tungstic Acid. when fused without weight is non Conductor with moderate pressure it increases Conductor it is until it is 700 ohms resistance and by taken pressure off ~~gas~~ is N.C. again

Stibium sulphuret Acid. N C

Sulphuret antimony. N C

Glannuum Sulfuric. N.C.

Carbonate of lead. N.C.

Titanic Acid. Slightly Cond

New Brunswick Dec 17th 1878 91

Chas. Gibson

Protochloride Tin - Very good

Stannum Chloride Cryst. N.C.

Chromate Lead - N.C.

Plumb Phosphate N.C.

Cadmium oxidat - Very good

Nitrate of Lead - N.C.

Iodide Lead - N.C.

Sulphate Lead N.C.

Manganese Phosphate N.C.

New Jersey Dec 17th 1878

Thos A Edison

Amb. Carbonate – NON CONDUCTOR

Hypophosph Iron – ditto

Phosphate Iron – ditto

Chromic Acid 140 ohms no [illegible]

Borate of Copper Non conductor

Sulphuret Copper – no [illegible]

Acetate Nickel – Non conductor

Carbonate Manganese – Non Cond

New Receiver Dec 17th 1878
Thos. A. Edison

Bichromate Lead - Non Conductor

Acetate Copper. cryst - Non Conductor

Sub sulph Iron - Non Conductor

Picric acid - Non Conductor

Valer Iron - Non Conductor

Succinate Iron - Non Conductor

Carmine - Non Conductor

Bicarbonate Ammonia 140 ohms resist without ~~[illegible]~~ pressure and its resistance with pressure

New Jersey Dec 18th 1878

Chas. F. Edison

Cuprum Oxydulat Non Conductor
Cuprum Arsenicic - " "
Chromate Copper - " "
Cuprum oxydat " "
Chromat Cuprum _ good chrys crystals
Iodide Copper Nonconductor

Cupri Cyan: Non Conductor
Cuprum Oxalic ditto
Formate Copper ditto
Sulphate Cobalt Non Con
Nitroprussia Kupper - Non Con
Natrum Formicicum - Non Conductor

New Receiver Dec 18th 1878.

Chas. E. Collins

Manganese Boracic - NON CONDUCTOR

Protoxide Nickel - ditto

Ferr. Tannic - Non Conductor

Tartrate Iron - Very Slight - Count [illegible]

Cobalt Carbonic Very Slight

Nickel Carbonic - Without previous shows about 16000 ohms with pressure decreases to 4000 ohms

Nickel oxidic - Non Conductor

Alumina (gum) - Non Conductor

New Receiver Dec 18th 1878

Geo. F. Gibson

Iron Arseniate – Non Conductor

Ferrum Acetic Sice – ditto

Protoxide Iron – ~~ste~~ Very slight Conductor ~~without~~ pressure (could not measure it above only 2 div.) but with pressure resistance was reduced to 3000 ohms

Uran Nitric 1100 ohms resistance

Uran Kalium Acetic Non Con

Lactate Iron Non Con

Iron Cy Hydrogen – see next page

New receiver Dec 18th 1878
Chas J. Brown

Iron by Hydrogen - without any pressure shows 2 degs Equal to about 15000 ohms. and with pressure there is no resistance what ever - by taking pressure off goes to 15000 ohms again. Can show any resistance by pressure -

Lodide Iron - Non Conductor

Urani Sulph - 200 ohms as this one is wet

Uran Nitric - Non Conductor

Ferri Ammon Citras - Very slight -

NEW RECEIVER DECEMBER 1878

Charles P. Edson

Iron Oxalate - Non Conductor

Tungstate Zinc - Non Cond.

Cerium Sulfuric without pressure 4000 ohms - with pressure 600 ohms

Barium Hyposulfuric - Non Cond

Iodide Barium - 4000 ohms - moist

Valerianate Magnesia - Non Conductor

Lactate Zinc - Non Conductor

New Brunswick Dec 18th 1878
Thos A Edison

Phosphat Lime Non Conductor

Aluminia Acetate. — N.C.

Sulphate Strontia N.C.

Oxalate Strontia — N C

Carbon of Lime — N C

Acetate Lime Very, Very, Small

Phosphate Aluminia N.C.

Oxalic Cobalt Non Conductor

New Receiver Dec 18th 1878
Chas R. Dunion

Carbonate Zinc non Conductor

Acetate Zinc non Conductor

Aluminum Sulfuric non Conductor

Sulphate Lime non Cond

Tartaric Magnesia non Cond

Magnesia Sulphate non Cond

Calcium Phosphate slightly Cond

New Receiver Decl 18th 1878

Thos A Edison

Chlorate ~~of~~ Strontia – without pressure 12000 ohms with pressure 4.400 ohms

—

Acetate Strontia Non Conductor

—

Carbonate Strontia Non Conducting

—

Barium fluoral very slight

—

Strontium hydric Non Conductor

—

Sulphuret Barium without pressure about 7.000 ohms with pressure 4.400 ohms

New Receiver Dec 18th 1878 119
Thos. A. Edison

Barium Chloricum N C

Carbonate Baryta N C

Acetate Baryta N C

Phosphate Magnesia N C

Corydalin N C

Iodide Calcium N C

Hyperoxide Baryta N C

New Lecture Dec 18th 1878
Thos A Edison

Zinci Cyanur - Non Conductor

Chlorate Lime non conductor

Sulphate of Lime non Conductor

Quinine Sulphate - Non Conductor

Picrotoxin N.C.

Amygdalin N.C.

Bismuth Lactophosphate N.C

Bromide Cadmium N.C

New Reewa Dec 18th 1878
Chas P Ellison

Valerianate Zinc - Non Conductor

Tartrate Potash 2600 ohms - dry

Nitrium bi Carbonate non Cond

Sulphate Potash non Condr

Nitrate Mercury 6000 ohms

Citrate Potash shows 6 degs

Molybdate Soda Non Conductor

Stannate Soda Non Condr

Carbonate Cadmium Non Condr

New-Rochelle Decr 18th 1878
Chas. T. Edison

Chromate of Potash - 3 degs -

Citrate Soda non Conds

Soda Fluoridum - Non Cond

Oxalate Soda non Conductor

Tungstate Soda N. C -

Ferrocyanide Soda, very slight

Phosphate Soda non Cond

Sulpho - Carbol Soda - non Cond

Chromate Soda throws 6 degs
With gradium

New Receiver Dec 18th 1870
Chas. P. Edwards

Hyperoxide of Lead - perfect Condn

Tannate of Zinc - Non Condn

Cobalt Oxydat - see next page

Cadmium Sulphuret N.C.

Nitrum pyrophosph N.C.

Arsenite Sodium N.C.

Oxalate Cerium N.C.

Bisulphate Potassa N.C.

Sodium Sulphovinate N.C.

Cadmium Sulphate N.C.

New Recorder Dec 18th 1878
Chas. A. Edison

Cobalt Oxydate - without pressure shows 1 dry cor. gal, 240 ohms with pressure

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Phosphide Zinc - N.C.

Sulphide Zinc N.C.

Sulpho Carbonate Lime, N.C

Bromide Cadmium N.C.

Sodium permangan gives 4 dry without pressure 17 00 ohms with pressure

New Receiver Dec 18th 1878
Chas. F. Edison

~~Zinc ferro~~
Zinc ferro cyanat – without pressure gives 5 deg. – with pressure 4400 ohms

---

Lithium Carbonic – N.C.

Nitrium Benzoic Non Conductor

Bi-sulphate Soda without pressure 1300 – with pressure 410 ohms

---

Cadmium Chloride 170 ohms without pressure – damp

New Receiver Dec 15th 1878
Chas. J. Edison

Nat Sulpho Carbonic. slightly shows 5 days.

Manganate Soda - Slightly - Very little

Acetic Antimony Non Conductor

Sodium nitro prusside - Non C

Nitrate Soda - Non Conductor

Hyposulphite Soda Non Condr

Hypophosphite Amon 400 ohms damp

New Rochelle Dec 1st 1878
Chas P Edison

Potassium - N.C.

Kalium Bi-Carbonic N.C.

Iodide Sodium 100 ohms
Note unmistakeable by current lamp

Binoxalate Potash slightly
shows 2 degs

Oxalate Potash - Non Conductor

Antimonate Potash 740 ohms
slightly lamp

Bisulphate Potash N.C.

Sulpho-Carbonate Potassi N.C.

Was Received Dec 18th 1878 117
Chas. P. Edison

Solution Ammonia N.C.

Nitrate Potash. slightly. 3 days

Ammoniac Sulphite N.C.

Chloride Potassium N.C.

Ammon Urii Non Conductor

Anthracate of Potash 740 ohms
Cost

Tartrate of Ammonia N.C.

New Receiver Dec 18th 1878
Thos. A. Edison

Kalium Carbonic 470-
nodery moist-

Chromate Potassa 6000 ohms

Sulphate Amonia. nightly
7 days

Kalium Hypermanganic N.C.

Tungstate Ammon N.C.

Succinate Ammonia N.C.

Ammon Uric N.C.

Cyanide Potassium

New Receiver Dec 18th 1878
Chas P Edison

Phosphate Potash N.C.
Chlorate Potash. N.C

Antimoniate Potash. 800 ohms

Kali Hypochloric N.C

Phosphate Ammonia. N.C

Caustic Baryta : N.C

Chrom oxydat N.C.

Cinnabar — N.C

Brucin — N.C

New Receiver - Dec 18th 1878
Chas. P. Edison

Asparagin - Non Conductor

Brown Aniline Non Conductor

Coffein Valerianic Non Cond

Benzil - oxydat Non Conductor

Coffein sulphuric Non Cond

Asarone Non Conductor

Yellow Aniline Non Con

Ammon Boracic Non Con

New Receipts Dec 15th 1878
Chas P Caisons

Ammon Citric Non Cond

Ammon Citrozotic Non Cond

Opocynin Non Cond

Ammon Bi Carbon Non Cond

Hydrobromate Ammonia N.C.

Ammon Gallic Non Cond

Antimon Oxyd Non Cond

Berberin Muriate Non Cond

Gum Renzoe Non Cond

New Receiver Dec 18th 1878 147

Chas F Edison

Aniline Green Non Cond.

Red Aniline. Non Cond

Berberin Sulph. Non Con

Berberin (Pure) Non Con

Molybdate Ammonia - N.C.

Hydrogodate Ammonia N.C.

White Aniline. Non Cond

Brown not Aniline Non Cond

Berberin Non Cond

Citrate of Caffein Non Cond

Alloxane Non Cond

New Receiver - Dec 18th 1878
Chas. P. Edison

Iodide Ammonium Very Slight
Benzoate Ammonia Non Cond
Caryophylli Non Cond
Coffein Non Conductor
Baptisia Non Conductor
Allozanton - Non Cond
Caseine Non Cond
Lycopodium Seed N.C.
Bimalic Ammonia N.C.
Aloin N.C.
Cinin Oxydate N.C.

New: Received Dec 18th 1878 151

Chas P Edson

Turmeric Non Conductor

Cantharides Vaseline Non Conductor

Naphthaline N.C.

Mannite N.C.

Palmitic Acid N.C.

Lycerine N.C.

Molybdaenic Acid without pressure shown 5 days with pressure 500 ohms

Narcotine Non Conductor

Menispermin Non C.

Chlor. Propylamin N.C

Cinchonidia N.C

Lumidine N.C

New Receiver Dec 18th 1875 183
Chas P Edson

Lupulin Non Conductor
Cinchonidin sulph N.C.
cinchonin N.C.
Chinin Valerianic N.C.
Morphine N.C.
Chinic Acid N.C.
Quinine Acetate Slightly Sol
Quinine Arsenate Non Conductor
Cochineal N. Good.
Quinine Tannate Non Conductor
Quinine Bromide Non Conductor
~~Kinic Acid~~
Jalapin Pur. Alb. N.C.
Morphiae Murias N.C.
Glycochol N.C.

New Receipts Dec 18th 1878

Chas P Ellison

Strychnine Nitras NC

Morphine Valerianate NC

Morphine Bi Meconate NC

Quinine Citrate NC

Quinine Ferrocyanide NC

Cinnamylic Acid NC

Quinine Iodide NC

" Hypophosph NC

Elaterium NC

Hyppuric Acid NC

Glucina Carb NC

Cherbin

Digitalinum Pur NC

New Receipts Dec 18th 1878
Chas B Ellison

glycyrrhizine	N.C.
Quinine Lactate	NC
Santitine	NC
Theine	NC
Acet Strychnia	NC
Sulph Strychnia	NC
Iodide Strychnia	NC
Quinine muriate	NC
Uric Acid	NC
Thymol	NC
Ultramarine	NC

New Receivers Dec 18th 1878
Chas. P. Ellison

Uric acid	NC
Veratrin	NC
Urea Pura	N.C.
Strychnia	N.C.
Saponin	NC
Santonine	NC
Picrotoxine	N.C.
Protein	NC

New Receiver Dec 19th 1878

Colonel Edison

Palladium Tellurium 70 ohms resistance

+

Carbozotic Acid Non Conductor

+

Camphoric Acid - N.C.

+

Carbon trichlor. cryst.

+

Phosphor Amorphous soft

-

trichlor Carbon cryst. N C

~~Tellurium~~

Selenium Non Condr

Received Dec 19th 1878 103
Chas P Edson

Iodic Acid - 70 ohms X dry

Iodide Sulphur Non Cond

Gum Myrrh Non Cond

Phosphate Lime . Non C

Grape Sugar N.C.

Gum Kino N.C.

Sulphate Soda 80 ohms

Litharge - non cond

Brazil Wood N.C.

New Receivers Dec 19th 1878 165
Chas R Edson

Gum Benzoin N.C.

Gum Dammarch N.C.

Oil Mace - pressed N.C.

Gum Tragacanth N.C.

Gum Cobibarian N.C.

Tannin Non C

Gum Zanzibar Non C

Gum Arabic Non C

Madder Non C

New Receiver Dec 19th 1879
Chas B Carson

Paris Green — Non Conductor

Scotch Snuff — N.C.

Iceland Moss — N.C.

Gum Damar — N.C.

Arsenic Acid — N.C.

Milk Sugar — N.C.

Gum Guiacum — N.C.

Bi Carb Soda — N.C.

New Jersey Dec 19th 1878

Chas R Edison

Grape Sugar non Conductor

Dextrine non Conductor

Cocoa Butter non Conductor

Asbestos non Conductor

Gum Ammoniac non Conductor

Chlor Potass non Conductor

Bermuda Arrowroot non Cond

Camphor non Conductor

New Receiver Decl 9th 1878
Chas. P. Edison

Salt Petre Nonconductor

Animal Charcoal shows 5 deg

Gold ore non conductor

Asphaltum Non Conductor

Borax - Non Conductor

Alum - Non Conductor

Sal Ammoniac Non Conductor

Ratton Stone Non Conductor

New Receiver Dec 19th 1878 173
Chas. P. Edison

—

One, brass Lake. good conductor

One, Pewatic Lake, good Conductor

—

Paraffine non Conductor

—

Spermaceti non Conductor

—

Chemical Lime wind up to 7 digs and potsinger

—

Fire Clay non Conductor

—

Ox ox mang - 70 ohms

—

Indian Hemp non Conductor

—

Sugar. shows 2 digs

New Receiver Dec 19th 1878 175

Chas R. Ellison

Sulphate zinc - non Conductor

—

Ferrocyanide Pattassium N.C.

—

Bronze Non Conductor

—

Limac Non Conductor

—

Russian Isinglass N.C.

—

Chalk - non Conductor

—

Protosulphate Iron Non Con

—

Rosin - Non Conductor

New Receiver Dec 19th 1878.
Chas. J. Edison

Lago — Non Conductor

Gamboge — Non Conductor

Bichromate Potash N.C.

Gum Hanlock N.C.

Dog wood N.C.

Ferro Cyan Potash N C

Argols Non Cond.

New Receiver Dec 19th 1878

Thos. A. Edison

Tripoli – non Conductor

Zinc. grain good Conductor

Cam wood non Conductor

Flax non Conductor

Saffron non Conductor

Sesquichloride Iron 54% solution
Acetate

Palm Fan show 1 day with pressure

New Receiver Dec 19th 1878 181
Chas R. Edson

Catchen Non Conductor

Potassii Chloridum N.C.

Acidi Titanium Oxide N.C.

Log wood Non Condr

Sulphuret Iron perfect Condr

Quince Seed N.C.

White Snake root N.C.

Cinnamon Bark N.C

New Receipts Decr 19th 1878 180
Chas. D. Gibson

white Bryony root	n c
Rosemary Leaves	n c
" Flowers	n c
Blood root	n c
Gum Myrrh	n c
Hounds Tongue	n c
Colts foot root	n c
Cardamon Seeds	n c
Orris root	n c
Zodary	n c
Pomegranate Peel	n c
Granium	n c
Button snake	n c
Plantain seed	n c

New Receiver Dec 19th 1878 [illegible]
Edward R. Edson

wild cherries	n c
Ipecac	n c
Pareira Brava	n c
Pumpkin Seeds	n c
Peach Pits	n c
Anise Seed	n c
Savin.	n c
Muskmelon seed	n c
Borage Flowers	n c
German Valerian	n c
Mountain Heath	n c
Burdock Seed	n c
Blackthorn ~~Berries~~	n c
Carroway Seed	n c
Indian turnip	n c

New Receiver Dec 19th 1878

Chas. P. Edison

golden seal	nc
Sweet birch bark	nc
Black Mustard seed	nc
Scurvy grass	nc
Wild Hound tongue	nc
Squaw weed	nc
Yellow Pond Lilly root	nc
white ash Bark	nc
Mountain Ash Bark	nc
Angelica tree Seed.	nc
Manna	nc
Chicory root	nc
Cascarilla Bark	nc
Tormentilla	nc
Calls foot root	nc
Angustura Bark	

New Receiver Dec 19th 1878
Chas. P. Edison

Wood Betony	NC
Pin Oak acorns	NC
yellow Jasamine root	NC
Simaruba bark	NC
gold thread	NC
Lucens Alba	NC
Unicorn Root	NC
Comfrey root	NC
Eucalyptus	NC
Poppy Caps	NC
Humility	NC
Belladonna root	NC
Pussy willow bark	NC
Chiretta Herb	NC
Lemon balm	NC
Peony root	NC

New Receivd Dec 19th 1878 (17)
Chas O Eaton

Blue Violet	N C
Asplenium Felix	N C
Buck Bean root	N C
Hibiscus	N C
Alum root	N C
Wild Celadine	N C
Wild Carrot Herb	N C
Aconite Root	N C
Liverwort	N.C.
Sassafras Pith	N C
Fenugreek Seed	N.C.
Yellow root	N C
Apple tree bark	N C
Dew berry root	N C
Dog wood	N C

New Receipts Dec 19th 1878 195

Chas P Carson

Bitter Orange peel	N C
Ginger root	N C
Potentilas repens	N C
Ergot	N C
Mexican Sarsparilla	N C
Blackberry root	N C
Bitter Almonds	N C.
Baltry cham	N C
Soap bark	N C
Rose flowers (dry)	N C
Colombo	N C
Lung moss	N C
Ginseng	N.C.
Barbary Bark	N C

New Receiver Dec 19th, 1878
Chas P Caison

Blue Cohosh N.C.
American Colombo N.C
Sour Centaury N.C
Wafer ash Bark N.C
+ Chloride Barium N.C.
Ammonia Citrate Iron shines
5 days - with pressure
Fusible Metal good conductor
Pebble stones - non Condr
Fused Nitre " "
Stearic Acid " "
Arsenious Acid " "
Sesqui-oxide Iron " "

New Receiver Dec 19th 1875
Chas. P. Edison

Phosphate Soda - non Conductor
Iron ~~with~~ with Sulphur - good conductor
Bi-Tartrate Potash - non Cond
Woodbridge Clay "
Iron Pyritics "
Sulphate Calcium "
Soap Stone "
Benzoic Acid "
Silicic acid "
Gum Senegal "
Black Flux 5000 ohms res.
Ferro Cyan Iron non Conductor
Oxide Copper shows 3 days
Acetate Soda " 2 "

New Receiver Dec 19th 1876
Chas. P. Edison

Indian Leaf Non Conductor
Amline red shows 2 degs
Hickory Nut shell - Non Condr
Tar - non Conductor
Carb. Copper - Non Condr
paper soaked in Sat Sot Nit
Potash - Non Conductor
Boric Acid - non Condr
Litmus non conductor
Burnt umber non Condr
Oxalate Ammonia N C
Anenonic Acid NC

New Receiver Dec 19th 1878
Chas. F. Edison

Carbonate Iron N. C.
Anthracine N. C.
Sulphate Mercury 440 ohms
Brass Filings, Conductor by Heavy
Oxalate Iron Non Conductor
Bonin's phosphorus. Non Condr
Coach's phosphorus, Non Condr
Powd. Battery Carbons - perfect Condr
~~Carb Ammonia Crystallized~~
Horse Chesnuts - Non Condr
Pumice Stone Non Conductor
Gum Rubstitute N C
Amalagam good Conductor
Sulphate Antimony

New Lacewer Dec 19th 1878
Chas A Edison

Antimonic Acid Non Conductor

Pepper - Non Conductor

Amber - Non Conductor

Spongy Platinum perfect Condr

Sulf. Alors - N.C.

Borate Baryta N.C. -

Prussian Blue N C

Ferro Cyan Copper N.C.

Gallic acid N.C.

Brimstone N.C.

Sulphate Potash N C

Sulphide Calcium N C.

Carb Potash - 140. ohms (wet)

Sand Blain

two miles of Sandy Bar

New Lecture Dec 9th 1878

Chas Edison

Powd Charcoal Non Conductor

Pyrolusit 40 ohm ones

~~Tartaric Acid~~ non Conductor

Purging Cassia non Conductor

Carbon made from gas perfect Conductor with pressure

Sumach Leaves Non Conductor

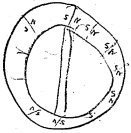
Acetate Mercury N.C.

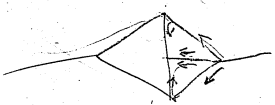
Fluoride of Calcium N.C.

Arsenious Acid N.C.

New Receiver Dec 19th 1878

Thos A Edison





New Receive Dec 22nd 1878

Thos A Edison

Chewing Tobacco - 3700 ohms res

Cyanide Potash 9000 ohms

Iodoform - Non Conductor

Bromide Potass Non Conductor

Nitrate Ammonia - shows 8 degs -

Flowers Sulphur - Non Conductor

Butter Nut Bark - Non Conductor

Chloral Hydrate - shows 7 degs

Tumeric - Non Conductor

Chlorate Potash - Non Conductor

New Receiver Dec 22nd 1878

Chas Olson

Lodge Lampblack - perfect Conductor

Methylviolet - Non Conductor

Permanganate Potash - 2000 ohms

Powd Charcoal - Shows 1 deg

Baric Chloride Non Condr

garden Celamine Non Condr

Nut galls Non Conductor

Powd Marble N.C.

Walnut shell N.C.

Oxalic acid Shows 3 degs

New Receiver Dec 22nd 1878
(Mark Edison)

Rosin Weed Non Conductor

Pennyroyal N.C.

Male Fern Root N.C.

Dragons Blood N.C.

Buckeye N.C.

Sumac N.C.

Thor Makers War - Cant get d— stuff out of bottle.

Tellurium Ore - N.C.

Sulphuret Soda - N.C.

New Receiver Dec 22nd 1878
Thos. A. Edison

Carb Magnesia N.C.

Iodine Resublimed N.C.

Nitrate Strontia N.C.

Drop Black ~~Too~~ 100 ohms.

Red silk cut 1/2 dozen times over with plumbago - good -

Lamp Black made from gasoline Combustion furnace - perfect Condr

Scarlet Aniline - Non Conductor

Black Aniline (water)

Calf brain Skin

New Receipts Dec 22nd 1878

Chas. E. Edison

Black Aniline (Alcohol) N.C.

Jobs Tears N.C.

Eleocompane seed N.C.

Silk boiled in Chloride Zinc 100 ohms

HAIR From a BAT with Carbon, Good Conductor

Balsam Apple seed N.C.

Pulv Scamony N.C.

New Receiver Dec 22nd 1875
Chas. J. Edison

Birds foot Violet - N.C.

Cape aloes N.C.

Balsam Apple Fruit N.C.

Blk Hellebore Root. N.C.

New Receiver Dec 29th 1878
Chas. F. Edison

Experiments with paper soaked with different oils for conductivity with No 1 coil & 6 cells Callaud battery

—

Oil Cloves — nonconductor
" White thyme "
" Fennel "
" Croton "
" Fusel "
" Wintergreen "
" Spearmint "
" Anise "
" Juniper wood "

New Receivd Dec 24th 1875

Chas P. Robinson

Juniper Berries	non Cond	
Pennyroyal	"	"
Orange	"	"
Bergamot	"	"
Lemon	"	"
Succini	"	"
wormseed	"	"
Citronella	"	"
Rosemary	"	"
Tansy	"	"
Carui	"	"
Cade	"	"
peppermint	"	"
Lemongrass	"	"
Lavender Flower	"	"

Recd Receiver Dec 26th 1878 –

Chas Gibson

~~Sulphuret Iron~~

The following Chemicals are not conductors and good for base of bottom.

Sulphuret Iron

Protoxide of Iron

Cadmium Oxyd

Chromic Acid

Sulphuret Iron

Oxequicyanid of Iron

Chlorat Potassium

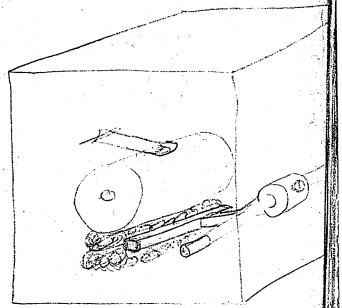
Rec'd Received Dec 26th 1878
Thos A. Edison

Nickel Carbonate –
Protoxide Iron
Uran Nitric
Uran Fulminate Acetic
Iron by Hydrogen
Uran Sulfate wet –
Cerium Sulfate
Sodium Borate
Chromic Nitric
Sulfate Potash
Cobalt Oxydate
Sodium Permanganate

229

New Haven Decr. 6th 1878

Thos. P. Edison



Now is the winter of our discontent

Now is the winter of our discontent

Now is the winter of our

Now is the winter

Happy New

Happy New Year

1157

Mid :

Midnight Midnight

Midnight Mid

Middle of the Night

Midnight

Midnight

Dear Sir Received

Yours

Recd Receiver 331

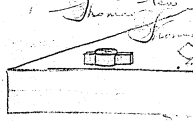
Recd Receiver

RECEIVED

Dec 28th 1875

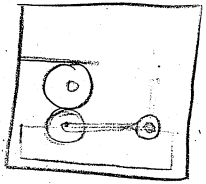
Happy New

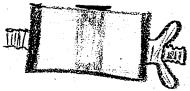
New Receiver



New Receiver Dec 2 1879

Chas P E





New Receiver Jan 7th 1879

Chas. P. Edison

#

Bases for Buttons using Caustic ~~Soda~~ and Acetate Mercury for each

#

Black oxide Manganese has no Motograph Effect does not mould good & and when wet is to soft

#

Carbonate Barytes has good E.M.G. Effect and moulds good

#

Lithurge has very little Emcy Effect dont mould good.

New Receiver Jan 7th 1879
Chas. E. Brown

Tripoli - has fair ERG
effect ~~[illegible]~~
~~[illegible]~~
~~[illegible]~~
~~but~~ the question does
not appear [illegible]
seconds after the current
has been [illegible]

---

damar - work [illegible]
opposite to [illegible]
more [illegible] when the
current is on

Tripoli is to off after
being wet it all sticks off
ng.

HOOD MONTANA

New Receiver Jan 8th 1879
(Thos. A. Edison)

Button burned from piece of charcoal soaked in Solution Caustic Soda, dried out, and then soaked in Solution of acetate Iron is no good has no Photographic Effect what will he be about resistance

Chlor Potass has fair Emly Effect but does not mould good, crumbles,

Caustic Magnesia has good Emy Effect Moulds good

Notes Received. Jan 8th 1879

Thos P. Evans

Cantons Phosphorus has pretty good Eng effect - but dont mould as good as chalk

Nut galls. has a little Eng effect - but is n.g. by putting water on. Makes a paste on surface

Brimstone - has very slight Eng effect - is too soft when water is put on

Sulphate Antimony has very small Eng effect. Moulds good

Was Received Jan 9th 1879
Chas Gibson

Burnt Umber has really
good Drying Quality also most
Good

Sugar is No. for Drying
Effect

Ferrous Chloride with
Chalk and [illegible]
Mercury [illegible] no Drying
Effect

Anthracine with
Acetate Mercury
has no Drying Effect

New Received Jan 9th 1879
Chas. P. Ewing

Borate Barytes has
good Emp. Crystals and
Moulds [illegible]

Bromide Potassium has
Obs. small Emp. [illegible]

Sulphate [illegible]
pretty good Emp.
but is too [illegible]
crumble [illegible]

Received Jan 9th 1879 [illegible]
Chas. D. Edwards

Genera of Diplanigera [illegible]
Guest [illegible] in relation
of Herbal & Mercury and
Then [illegible]
Caustic Soda [illegible]
Then [illegible]
Monographia [illegible] is [illegible]

[illegible] Carb Soda [illegible]
Eng. Effect [illegible]

Alum [illegible]
Eng. Effect [illegible]
foot

New Receiver Jan 9th 1879
Chas. F. Edison

Whitening - has good Emg Effect as good as chalk if not better moulds good will make large one for Recr

Borax fair Emg Effect moulds - good

Alum has nothing Effect
C.F.E.

9

Barium. Zoli.

h

Zinc [illegible]

C Cadmium oxalate 46
Chromic Chl. wt 79.5
Copper Sulphate 91
Chromic, acetate [illegible] 146
Cyanum chloride 90.5
Selenium Sulfuric
Cobalt oxalate

g

D

d

I

E

Mercl. [illegible]

y

3

[illegible] chloride

D

n

A. ~~Sulphuret for~~
Aluminium Chloride
~~Sodium~~
Sulphuric Sulphuretted

t. Iron Sulphuret gd
Potassium Chlorid Tin

H. Manganese
" Calcium Chlorid
" Sulphur Well

W

X

Sat. 7
Sun. 8
Mon 12
Tues 13
Wed 14

Na_2SO_4 – Sulp Soda.
$CaCO_3$ Chalk
Hg_2Cl_2 Ac mur
Ca_3PO_4 ~~Phosphate Soda~~ Lime
Na_2O Caustic Soda
$MgSO_4$ Sul Magnesia

132	Antimony
133	Silp Mica
142	
145	Pond Boiling Carbon
146	Pumice Stone
147	
150	Sulph Antimony
151	
152	Pepper
154	
155	Borax Powder
159	Prussian Blue
162	
163	Pumice Stone
164	Sulphuric Acid
165	
168	Silpnitr Ag
16	
171	Charcoal

	Tinned Chemical
	Aspinal's [illegible]
	Borax
	Alum
	Sal [illegible]
	Rotten Stone
	Fire Clay
	Red Cab Lock
	Chlor [illegible]
	Permanganate Potash
	Salt Peter
	Pot Chlorate
	Potassic [illegible]
	Chemical [illegible]
	Sulphuric [illegible]
	Sulphur
	Tar
	Tar [illegible]